

COPY

Patent

REAL-TIME IN-LINE TESTING OF SEMICONDUCTOR WAFERSABSTRACT

1           An apparatus and method for the real-time, in-line testing of  
2 semiconductor wafers during the manufacturing process. In one  
3 embodiment the apparatus includes a probe assembly within a  
4 semiconductor wafer processing line. As each wafer passes adjacent  
5 the probe assembly, a source of modulated light, within the probe  
6 assembly, having a predetermined wavelength and frequency of  
7 modulation, impinges upon the wafer. A sensor in the probe  
8 assembly measures the surface photovoltage induced by the modulated  
9 light. A computer then uses the induced surface photovoltage to  
10 determine various electrical characteristics of the wafer.